COMPLETE LISTING OF THE CLAIMS

The following lists all of the claims that are or were in the above-identified patent application.

- 1. (Canceled)
- 2. (Previously Presented) A method of fabricating a MOSFET, comprising: forming a trench in a surface of a semiconductor, the trench defining a mesa; forming a first insulating layer along a wall of the trench;

forming a gate in the trench, the gate being insulated from the semiconductor by the insulating layer;

performing a plurality of implantations of dopant of a first conductivity type into the mesa to form a body region, wherein each of the implantations has a different energy, and each of the implantations is performed at a dose that is the same as the dose for another of the implantations; and

implanting dopant of a second conductivity type into the mesa to form a source region.

- 3. (Original) The method of claim 2, wherein the dose of the implantations is about $7 \cdot 10^{12} \text{ cm}^{-2}$.
- 4. (Original) The method of claim 3, wherein the different energies respectively of the implantations comprise 1 MeV, 700 keV, 525 keV, 375 keV, 225 keV and 125 keV.
- 5. (Previously Presented) The method of claim 9, wherein a first of the implantations is at a first dose, and a second of the implantations is at a second dose, the second dose differing from the first dose.
- 6. (Previously Presented) The method of claim 9, wherein respective doses and energies of the implantations are such that the implantations in combination provide a uniform doping for the body region.

- 7. (Previously Presented) The method of claim 9, further comprising completing the MOSFET without performing a process to diffuse the dopant of the first conductivity type in the body region, whereby energies of the implantations control a depth of a body-drain junction at an interface between the body region and an underlying portion of the semiconductor.
- 8. (Previously Presented) The method of claim 2, wherein forming the trench comprises:

forming a hard mask on the semiconductor; and etching the semiconductor through an opening in the hard mask to form the trench.

9. (Previously Presented) A method of fabricating a MOSFET, comprising: forming a trench in a surface of a semiconductor, the trench defining a mesa, wherein forming the trench comprises forming a hard mask on the semiconductor, and etching the semiconductor through an opening in the hard mask to form the trench;

forming a first insulating layer along a wall of the trench;

forming a gate in the trench, the gate being insulated from the semiconductor by the insulating layer;

performing a plurality of implantations of dopant of a first conductivity type into the mesa to form a body region, wherein each of the implantations has a different energy, and a maximum implant energy for the implantations causes dopant of the first conductivity type to penetrate through the hard mask into the semiconductor to a depth desired for a junction between the body region and a drain region; and

implanting dopant of a second conductivity type into the mesa to form a source region.

- 10. (Original) The method of claim 8, wherein forming the gate comprises introducing polysilicon into the trench.
- 11. (Previously Presented) A method of fabricating a MOSFET, comprising:
 forming a trench in a surface of a semiconductor, the trench defining a mesa, wherein
 forming the trench comprises forming a hard mask on the semiconductor, and etching the
 semiconductor through an opening in the hard mask to form the trench;

forming a first insulating layer along a wall of the trench;

forming a gate in the trench, the gate being insulated from the semiconductor by the insulating layer, wherein forming the gate comprises introducing polysilicon into the trench; performing a plurality of implantations of dopant of a first conductivity type into the mesa to form a body region, wherein each of the implantations has a different energy;

implanting dopant of a second conductivity type into the mesa to form a source region; with the hard mask in place, oxidizing an exposed surface of the polysilicon to form a second oxide layer at the top of the trench, the second oxide layer extending down into the trench;

removing the hard mask; and depositing a metal layer on a surface of the second oxide layer and the surface of the mesa.

- 12. (Previously Presented) The method of claim 2, further comprising:
 forming a second insulating layer over the mesa;
 etching an opening in the second insulating layer; and
 depositing a metal layer into the contact opening to form an electrical contact with the
 source region.
- 13. (Previously Presented) The method of claim 10, further comprising: with the hard mask in place, oxidizing an exposed surface of the polysilicon to form a second oxide layer at the top of the trench, the second oxide layer extending down into the trench;

removing the hard mask; and depositing a metal layer on a surface of the second oxide layer and the surface of the mesa.

14. (Previously Presented) The method of claim 9, further comprising: removing the hard mask; forming a second insulating layer over the mesa; etching an opening in the second insulating layer; and

depositing a metal layer into the contact opening to form an electrical contact with the source region.

15. (Previously Presented) The method of claim 9, further comprising: with the hard mask in place, oxidizing an exposed surface of the polysilicon to form a second oxide layer at the top of the trench, the second oxide layer extending down into the trench;

removing the hard mask; and depositing a metal layer on a surface of the second oxide layer and the surface of the mesa.

- 16. (Previously Presented) The method of claim 11, wherein each of the implantations is performed at a dose that is the same as the dose for another of the implantations.
- 17. (Previously Presented) The method of claim 11, wherein a first of the implantations is at a first dose, and a second of the implantations is at a second dose, the second dose differing from the first dose.
- 18. (Previously Presented) The method of claim 11, wherein respective doses and energies of the implantations are such that the implantations in combination provide a uniform doping for the body region.
- 19. (Previously Presented) The method of claim 11, further comprising completing the MOSFET without performing a process to diffuse the dopant of the first conductivity type in the body region, whereby energies of the implantations control a depth of a body-drain junction at an interface between the body region and an underlying portion of the semiconductor.